

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A system for guiding a vehicle along a guiding rail, having a rolling surface and at least one side surface that constitutes a guiding surface, the system comprising:

a guiding roller device cooperating with the rolling surface and the side surface of the rail and including

a rolling part having a peripheral surface for rolling contact ~~at a peripheral surface~~ with the rolling surface of the rail, and

at least one side part ~~coming into~~ for contact with the side surface of the rail ~~fac~~ that faces the at least one side part, wherein

the rolling part and the side part are rotationally connected to each other so that the side part rotates at the same speed that the rolling part rolls on the rolling surface of the rail, and

the side part ~~is in pin-point, when in~~ contact with the side surface of the rail and has, contacts the side surface of the rail only at a one point of contact with the rail, the same speed as the rolling part on the rolling surface on rail at a time.

2. (Currently Amended) The system according to Claim 1, wherein ~~the side rolling part of the roller device~~ includes at least one rolling support roller ~~and,~~

the side part includes at least one side roller, and

the side part has a diameter and a shape for contacting the side surface of the rail so that the side roller, at the point of contact with contacting the side surface of the rail, has the same rotational speed as the rolling part contacting the rolling surface of the rail.

3. (Currently Amended) The ~~guiding~~ system according to Claim 2, ~~for~~ wherein the guiding-by system has two parallel guiding rails having respective exterior side surfaces as guiding surfaces, and the guiding system-comprising comprises a support roller and a side roller for each guiding rail.

4. (Currently Amended) The system according to Claim 2, wherein the rail has two side surfaces,
~~the guiding roller device~~ rolling support roller includes a central roller, and the at least one side part includes two side rollers-as side parts, the two side parts rollers each having a diameter and a shape for contacting a respective side surface of the rail at respective points of contact so that the two side rollers, at the points of contact with the side surfaces of the rail, have rotate at the same speed-as that the central roller-at rolls on the rolling surface of the rail.

5. (Currently Amended) The system according to Claim 2, wherein ~~areas of contact of the side roller have~~ has, in radial section, a portion with a convex profile, with an outermost surface that contacts the side surface of the rail, and contact surfaces of the rail-are has an essentially planar side surface for contacting the outermost surface of the convex profile of the side roller.

6. (Previously Presented) The system according to Claim 4, wherein the side rollers are rotationally synchronized with the central roller.

7. (Currently Amended) The system according to Claim 4, including means for synchronizing rotation speed of the side rollers with rotation speed of the central roller, the means for synchronizing comprising teeth associated respectively with the side roller and with the central roller, and which mesh with one another.

8. (Currently Amended) The system according to Claim 7, wherein the teeth are mounted on a support via sliding means sliding between the teeth and the support when a ~~relative~~ force exceeding a predetermined threshold is applied to the sliding means.

9. (Previously Presented) The system according to Claim 7, wherein the means for synchronizing rotation speed of the side rollers with rotation speed of the central roller includes belts and pulleys.

10. (Currently Amended) The system according to Claim 7, wherein the means for synchronizing rotation speed of the side rollers with rotation speed of the central roller comprises a ring of a nondeformable solid material in contact with a bearing surface of the central roller ~~to ensure rotation~~ for frictional engagement of the side rollers ~~by friction~~ with the central roller.

11. (Currently Amended) The system according to Claim 10, wherein the central roller includes a support shaft, a ring rotating freely, and ~~maintained by~~ a support device connected to ~~a~~ the support shaft and maintaining the ring in position.

12. (Currently Amended) The system according to Claim 11, wherein the support device comprises rollers ~~for support~~ supported by ~~a~~ the ring and that come into rolling contact with an internal annular surface of the ring.

Claims 13 and 14 (Cancelled).

15. (Currently Amended) A system for guiding a vehicle along a guiding rail, having a rolling surface and ~~at least one two side surface surfaces that constitutes a~~ constitute guiding-surface surfaces, the system comprising:

a guiding roller device cooperating with the rolling surface and the side ~~surface~~ surfaces of the rail and including

~~a rolling part~~ central roller having a peripheral surface for rolling contact ~~at a peripheral surface~~ with the rolling surface of the rail, and

~~at least one~~ two side part coming into rollers for contact with the ~~respective side surface~~ surfaces of the rail facing that face the ~~at least one~~ respective side part rollers, wherein

~~the rolling part~~ central roller and the ~~side part~~ rollers are rotationally connected ~~and the side part is in pin-point contact with the rail and has, at a point of contact with the rail, the same speed as the rolling part on the rolling surface on rail, and the guiding roller device includes a central roller, as a support roller, and two side rollers as side parts,~~

the two side rollers, when in contact with the respective side surfaces of the rail, contact the respective side surfaces of the rail only at one point at a time, and

the two side parts having rollers each have a diameter and a shape for contacting the side surfaces of the rail so that the two side rollers, at the points of contact with the respective side surfaces of the rail, have rotate at the same speed as that the central roller at rolls on the rolling surface of the rail.

16. (Currently Amended) The system according to Claim 15, wherein ~~areas of contact of the side roller have~~ has, in radial section, a portion with a convex profile, with an outermost surface that contacts the side surface of the rail and contact surfaces of the rail are has an essentially planar contact surface for contacting the outermost surface of the convex profile of the side roller.

17. (Previously Presented) The system according to Claim 15, wherein the side rollers are rotationally synchronized with the central roller.

18. (Currently Amended) The system according to Claim 15, including means for synchronizing rotation speed of the side rollers with rotation speed of the central roller, the means for synchronizing comprising teeth associated respectively with the side roller and with the central roller, and which mesh with one another.

19. (Currently Amended) The system according to Claim 18, wherein the teeth are mounted on a support via sliding means sliding between the teeth and the support when a ~~relative~~ force exceeding a predetermined threshold is applied to the sliding means.

20. (Previously Presented) The system according to Claim 18, wherein the means for synchronizing rotation speed of the side rollers with rotation speed of the central roller includes belts and pulleys.

21. (Currently Amended) The system according to Claim 18, wherein the means for synchronizing rotation speed of the side rollers with rotation speed of the central roller comprises a ring of a nondeformable solid material in contact with a bearing surface of the central roller ~~to ensure rotation~~ for frictional engagement of the side rollers ~~by friction~~ with the central roller.

22. (Currently Amended) The system according to Claim 21, wherein the central roller includes a support shaft, a ring rotating freely, and ~~maintained by~~ a support device connected to ~~a~~ the support shaft and maintaining the ring in position.

23. (Currently Amended) The system according to Claim 22, wherein the support device comprises rollers ~~for support~~ supported by ~~a~~ the ring and that come into rolling contact with an internal annular surface of the ring.

24. (Currently Amended) A system for guiding a vehicle along a guiding rail, having a rolling surface and ~~at least one~~ two side surface surfaces that ~~constitutes a~~ constitute guiding surface surfaces, the system comprising:

a guiding roller device cooperating with the rolling surface and the side surface of the rail and including

~~a rolling part for rolling contact at a peripheral surface with the rolling surface of the rail, and at least one side part coming into contact with the side surface of the rail facing the at least one side part~~ two rollers, each roller having a radial external part for contacting a respective side surface of the rail and a radial internal part for contacting the rolling surface of the rail, wherein

the two rollers are arranged in a V-shaped configuration,

~~the rolling part and the side part~~ two rollers are rotationally connected to each other so that the two rollers turn at the same speed, and

~~the side part is~~ two radial external parts, when in pin-point contact with the respective side surfaces of the rail and has, at a point of contact with, contact the respective side surfaces of the rail, the same speed as the rolling part on the rolling surface on rail, and the system includes two rollers, each roller having a radial external part for contacting a side surface of the rail and a radial internal part for contacting the upper surface of the rail, the two rollers being arranged in a V-shaped configuration only at one point at a time.

25. (Currently Amended) A system for guiding a vehicle along a guiding rail, having a rolling surface and ~~at least one~~ two side surface surfaces that ~~constitutes a~~ constitute guiding surface surfaces, the system comprising:

a guiding roller device cooperating with the rolling surface and the side surface of the rail and including

~~a rolling part for rolling contact at a peripheral surface with the rolling surface of the rail, and at least one side part coming into contact with the side surface of the rail facing the at least one side part~~ two rollers, each roller having a radial

external part for contacting a respective side surface of the rail and a radial internal part for contacting the rolling surface of the rail, wherein

the two rollers are arranged in a V-shaped configuration,
~~the rolling part and the side part~~ two rollers are rotationally connected to each other,

a first of the two rollers has a peripheral ring contacting an annular surface of a second of the rollers to ensure rotation of the first of the rollers by friction with the second of the rollers, so that the two rollers turn at the same speed,
 and

~~the side part is two radial external parts, when in pin-point contact with the respective side surfaces of the rail and has, at a point of contact with, contact the respective side surfaces of the rail, the same speed as the rolling part on the rolling surface on rail, and the system includes two rollers, each roller having a radial external part for contacting a side surface of the rail and a radial internal part for contacting the upper surface of the rail, the two rollers being arranged in a V-shaped configuration, wherein a first of the rollers has a peripheral ring for contacting an annular surface of a second of the rollers to ensure rotation of the first roller by friction with the second roller only at one point at a time.~~

26. (Currently Amended) A system for guiding a vehicle along a guiding rail, having a rolling surface and at least one side surface that constitutes a guiding surface, the system comprising:

a guiding roller device cooperating with the rolling surface and the side surface of the rail and including

a rolling part having a peripheral surface for rolling contact ~~at a peripheral surface~~ with the rolling surface of the rail, and

at least one side part ~~coming into~~ for contact with the side surface of the rail ~~facing that faces~~ the at least one side part, wherein

~~the side part is in pin-point, when in contact with the side surface of the rail and has, contacts the side surface of the rail only at a one point of contact with the rail at a time, so the side part rotates at the same speed as that the rolling part rolls on the rolling surface on of the rail, and~~

~~areas of contact of the side part have~~ has, in radial section, a portion with a convex profile with an outermost surface that contacts the side surface of the rail at the point.

27. (Currently Amended) A system for guiding a vehicle along a guiding rail, having a rolling surface and at least one side surface that constitutes a guiding surface, the system comprising:

a guiding roller device cooperating with the rolling surface and the side surface of the rail and including

a rolling part having a peripheral surface for rolling contact at a peripheral surface with the rolling surface of the rail, and

at least one side part ~~coming into~~ for contact with the side surface of the rail ~~facing that faces~~ the at least one side part, wherein

~~the side part is in pin-point, when in contact with the side surface of the rail and has, contacts the side surface of the rail only at a one point of contact with the rail at a time, so the side part rotates at the same speed as the rolling part rolling on the rolling surface on of the rail, and~~

~~the side part of the guiding roller device is part of~~ comprises a side roller having an axis of rotation, and, in a plane perpendicular to the axis of rotation and inclined with respect to a plane perpendicular to the rolling surface of the rail, ~~areas of contact of the side part have~~ roller has, in radial section, a convex profile with an outermost surface that contacts the side surface of the rail as the side roller rotates about the axis of rotation.